



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,070	09/22/1999	ARTHUR ANDERSON	3876	4148
32681	7590	11/22/2004		
PLANTRONICS, INC. 345 ENCINAL STREET P.O. BOX 635 SANTA CRUZ, CA 95060-0635			EXAMINER RYMAN, DANIEL J	
			ART UNIT 2665	PAPER NUMBER

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/401,070

Applicant(s)

ANDERSON ET AL.

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 and 56-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 and 56-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed 8/24/2004 have been fully considered but they are not persuasive. On page 15 of the Response, Applicant argues that Endick's Option Processor does not directly control the options. In support of this argument, Applicant directs Examiner's attention to Fig. 7, which Applicant asserts is evidence that the PBX controls the options rather than the option processor.
2. Examiner, respectfully, disagrees with Applicant's analysis. First, Endick explicitly discloses that the option processor directly controls the options by stating "[t]he Report Specific ID (REPORT) command is issued by the Option Processor when it wants to request [information] from an option" (col. 9, lines 1-6). Since Applicant's limitation does not specify the type of control that the option processor has over the unit or that the option processor is the only device which controls the units, Examiner asserts that Endick renders Applicant's amended limitation obvious.
3. Second, the passages to which Applicant directs Examiner's attention do not support Applicant's contention. In these passages, Endick teaches that messages pass through the system in an ordered fashion (Fig. 7 and col. 6, line 47-col. 7, line 10). For example, Endick discloses that "[e]vents flow from the microcontroller 118 to the lowest priority option (Message4), to the highest priority option (Message 5) to the PBX (Message 6)" (col. 6, lines 43-46). However, "[a]t any point in the above-described process an option or the Base Processor can intercept, modify or synthesize a command or event message" (col. 6, lines 53-55). Thus, Endick is not teaching that the PBX is the only device which controls options in the system. Rather, Endick

Art Unit: 2665

teaches that messages flow through a particular sequence of units where any device can synthesize commands at any point. For the above reasons, Examiner asserts that Endick renders Applicant's amended limitation obvious.

4. On pages 15-16 of the Response, Applicant argues that the Options Processor is not independent. Specifically Applicant argues that, contrary to Examiner previous argument that the Option Processor independently issues RESET commands, the Options Processor issues the RESET command in response to a microcontroller reset. Examiner notes that, although Endick discloses that a RESET command is issued in response to a microcontroller reset, Endick does not disclose that this is the only time the Option Processor issues a RESET. In fact, Endick's teachings suggest the opposite. Endick teaches that "[t]he Software Reset Option (RESET) command is issued by the Option Processor when it wants to perform a software reset of one or more options" (col. 8, lines 59-63). Thus, Endick discloses, or at the very least suggests, that the Option Processor can reset each option individually ("reset of one or more options"). If the RESET command was issued only in response to a processor reset, then it makes little sense for the Option Processor to have the capability to reset one option individually.

5. Nonetheless, even assuming Applicant's argument is true, Endick discloses that the Option Processor is independent since it can independently issue a Report command (col. 9, lines 1-6) and since it is independently implemented in firmware (col. 6, lines 47-52). Thus, given the above arguments, Examiner asserts that Endick renders Applicant's "independent" limitation obvious.

Art Unit: 2665

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1-3, 14-16, 26, 27, 33, 40, 45, 56-58, 60, 61, 66, 70, 71, 75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art.

8. Regarding claims 1, 14, 15, 26, 33, 66, 70, and 75, Endick discloses a telecommunication system comprising: a telephone handset (ref. 106 and col. 3, lines 4-13); an accessory adapter (option bus and microcontroller) coupled to the telephone handset and having an accessory interface bus (option bus) for transmitting and receiving communications packets, the adapter being configured to be coupled to a base telephone (Figs. 1, 4, and 5; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38) where the accessories include a headset attachment (col. 3, lines 66-68); a micro-controller coupled to the interface bus (ref. 118; col. 3, lines 27-36; and col. 5, lines 22-42), for controlling and monitoring at least one accessory to the telecommunications headset which is coupled to the interface bus (col. 3, lines 27-36 and col. 5, lines 22-42), wherein the micro-controller controls and monitors the accessory through the bi-directional transmission of communications packets between the micro-controller and the accessory via the interface bus (col. 3, lines 27-36 and col. 5, lines 22-42) with one purpose being to test the accessory and verify proper operation of the accessory (col. 8, lines 7-10); and an accessory for the telephone coupled to the accessory interface bus of the headset adapter,

Art Unit: 2665

wherein the accessory can be directly controlled and monitored by the headset adapter independently of the base telephone via the transmission of communications packets between the accessory and the headset adapter over the accessory interface bus (col. 3, lines 4-14; col. 3, line 27-36; col. 3, line 58-col. 4, line 10; col. 5, lines 22-42; col. 6, lines 47-64; col. 8, lines 15-29; and col. 9, lines 1-6).

Endick does not disclose that the telecommunication system comprises a telephone headset and a headset adapter coupled to the telephone headset and having an accessory interface bus. However, Endick does disclose having an accessory interface bus (Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). This bus is part of an accessory adapter where the accessory adapter is broadly defined to be a system which interfaces a phone system to accessories. Endick also discloses that these accessories can include a telephone headset (col. 3, lines 66-68). It would have been obvious to one of ordinary skill in the art to have the telecommunication system comprise a telephone headset and a headset adapter where the headset adapter is broadly defined to be the accessory adapter since it is known in the art to include a telephone headset as an accessory item in order to allow a user of the telecommunication system to use the headset.

Additionally, Endick does not expressly disclose that the accessories are headset accessories since Endick only expressly discloses accessories for the base telephone. However, Endick does leave open the possibility for the accessories to be headset accessories by disclosing that the accessories are not limited to the aforementioned accessories for the base telephone (col. 3, line 66-col. 4, line 2). Applicant admits that accessories for a telephone headset are well known as prior art (page 1, line 13-page 2, line 21) where the accessories are used to add

Art Unit: 2665

functionality to or ease the use of a telephone headset. It is also very old and well known in the art to use buses to communicate between devices connected to the bus, and thus it would have been obvious to one of ordinary skill in the art at the time of the invention that the bus could be used to add accessories to another accessory. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the accessories include accessories for the telephone headset since accessories to telephone headsets are very well known as a means to add functionality to or ease the use of a telephone headset.

9. Regarding claims 2, 71, and 76, referring to claims 1, 70, and 75, Endick in view of Applicant's admitted prior art discloses that the accessory interface bus includes at least one bi-directional signaling line for transmitting and receiving the communications packets between the accessory and the headset adapter in order to control and monitor the accessory (col. 8, lines 15-29).

10. Regarding claims 3, 16, and 27, referring to claims 1, 15, and 26, Endick in view of Applicant's admitted prior art discloses that the accessory interface bus further includes: a power bus containing lines for +/- 5V and +/- VAUX (col. 3, lines 58-60 and col. 5, lines 43-48) where the +5V and +VAUX is broadly defined as a high voltage rail and the -5V and -VAUX is broadly defined as a low voltage rail; and at least one bi-directional signaling line for transmitting and receiving communications packets between the accessory and the headset adapter in order to control and monitor the accessory (col. 8, lines 15-29).

11. Regarding claim 40, Endick discloses a method for controlling or monitoring an accessory to a telephone using an accessory adapter base and an interface bus, the method comprising: detecting whether an accessory is coupled to the interface bus (polling) (col. 8, lines

Art Unit: 2665

15-29); and transmitting a command or status request signal from the adapter base over the interface bus and to the accessory in order to directly control and monitor operation of the accessory, the controlling and monitoring the operation of the accessory being performed independently from a base telephone to which the adapter base is configured to be connected (col. 6, lines 47-64 and col. 8, line 15-col. 9, line 36).

Endick does not disclose that the telecommunication system comprises a telephone headset and a headset adapter coupled to the telephone headset and having an accessory interface bus. However, Endick does disclose having an accessory interface bus (Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). This bus is part of an accessory adapter where the accessory adapter is broadly defined to be a system which interfaces a phone system to accessories. Endick also discloses that these accessories can include a telephone headset (col. 3, lines 66-68). It would have been obvious to one of ordinary skill in the art to have the telecommunication system comprise a telephone headset and a headset adapter where the headset adapter is broadly defined to be the accessory adapter since it is known in the art to include a telephone headset as an accessory item in order to allow a user of the telecommunication system to use the headset.

Additionally, Endick does not expressly disclose that the accessories are headset accessories since Endick only expressly discloses accessories for the base telephone. However, Endick does leave open the possibility for the accessories to be headset accessories by disclosing that the accessories are not limited to the aforementioned accessories for the base telephone (col. 3, line 66-col. 4, line 2). Applicant admits that accessories for a telephone headset are well known as prior art (page 1, line 13-page 2, line 21) where the accessories are used to add

Art Unit: 2665

functionality to or ease the use of a telephone headset. It is also very old and well known in the art to use buses to communicate between devices connected to the bus, and thus it would have been obvious to one of ordinary skill in the art at the time of the invention that the bus could be used to add accessories to another accessory. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the accessories include accessories for the telephone headset since accessories to telephone headsets are very well known as a means to add functionality to or ease the use of a telephone headset.

12. Regarding claim 45, referring to claim 40, Endec in view of Applicant's admitted prior art discloses receiving a response signal from the accessory returning information on the current status of the accessory when a status request signal is transmitted (col. 8, line 15-col. 9, line 36).

13. Regarding claim 56, Endick discloses a communications protocol for an accessories interface bus comprising a plurality of commands to directly control, monitor, or identify any one of a plurality of accessories coupled to the interface bus independently of a base telephone to which the telephone accessories correspond (col. 6, lines 47-64 and col. 8, line 15-col. 9, line 36).

Endick does not disclose that the accessories interface bus is a telephone headset accessories interface bus; however, Endick does disclose having a headset accessory on the bus in addition to other accessories where the other accessories could be headset accessories although this is not expressly disclosed (col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). Applicant admits that accessories for a telephone headset are well known as prior art (page 1, line 13-page 2, line 21) where the accessories are used to add functionality to or ease the use of a telephone headset. It is also very old and well known in the art to use buses to

Art Unit: 2665

communicate between devices connected to the bus, and thus it would have been obvious to one of ordinary skill in the art at the time of the invention that the bus could be used to add accessories to another accessory. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the accessories include accessories for the telephone headset since accessories to telephone headsets are very well known as a means to add functionality to or ease the use of a telephone headset.

14. Regarding claim 57, referring to claim 56, Endick in view of Applicant's admitted prior art discloses that the plurality of commands include common commands for controlling and monitoring any one of the plurality of accessories and accessory specific commands for controlling and monitoring a specific accessory in the plurality of accessories (col. 8, line 15-col. 9, line 36).

15. Regarding claim 58, referring to claim 57, Endick in view of Applicant's admitted prior art discloses that the common commands include: a command for polling the interface bus and detecting each of the plurality of accessories (col. 8, line 15-col. 9, line 36); and a command for resetting each of the plurality of accessories (col. 8, lines 59-68).

16. Regarding claim 60, referring to claim 57, Endick in view of Applicant's admitted prior art discloses that the accessory specific commands include: a command for turning the specific accessory on or off (col. 7, line 56-col. 8, line 14, esp. col. 7, lines 59-63); a command for resetting the specific accessory (col. 8, lines 59-68); and a command for requesting the status of the specific accessory (col. 7, line 56-col. 8, line 14, esp. col. 8, lines 7-10).

17. Regarding claim 61, referring to 57, Endick in view of Applicant's admitted prior art does not expressly disclose that the accessory specific commands include a command for

Art Unit: 2665

simulating a button press of the specific accessory; however, Endick does suggest this by disclosing that an option can be turned on remotely (col. 7, lines 59-63) where it is obvious that an option typically have a power switch located on the device itself. In addition, remote control is very well known in the art as a means to allow a user to control a device without being in physical contact with the device. It would have been obvious to one of ordinary skill in the art at the time of the invention to use utilize remote control in order to allow a user to remotely control an accessory from the base such that the user is able to control the accessory without being in physical contact with the accessory.

18. Claims 4-6, 17-19, 28, 29, 34, 35, 41, 46, 72-74, and 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claims 1, 15, 26, 33, 40, 45, 70, and 75 above, and further in view of Yamaguchi (USPN 5,278,848) in further view of King (USPN 3,793,488).

19. Regarding claims 4, 17, 28, 34, 41, 46, 72, and 77, referring to claims 1, 15, 26, 33, 40, 45, 70, and 75, Endick in view of Applicant's admitted prior art does not expressly disclose that each communications packet includes a synch pulse which defines a transmission rate for the communications packet. Yamaguchi discloses, in a bi-directional communication system, having a synch pulse contained in each packet (col. 8, lines 10-15 where a frame and a packet can be viewed as being analogous). Yamaguchi further discloses that synch pulses are well known in the art (col. 10, lines 9-14). Typically a synch pulse is used in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal, as is

Art Unit: 2665

evidenced by King (col. 2, lines 10-39). It is also obvious that such a system would allow for a variety of transmission rates to be used such that each accessory defines its own transmission rate using the synch pulse. It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

20. Regarding claims 5, 18, 29, 35, 73, and 78, referring to claims 4, 17, 28, 34, 72, and 77, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King discloses that the synch pulse includes a bit having a bit period which defines the synchronization for the communications packet (King: col. 1, line 64-col. 2, line 39, esp. col. 2, lines 31-39). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. Endick in view of Yamaguchi in further view of King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (King: col. 1, line 64-col. 2, line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

21. Regarding claims 6, 19, 74, and 79, referring to claims 5, 18, 73, and 78, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King discloses that the rate bit includes a rising edge and a falling edge within the bit period (King: col. 2, lines 24-28) and that a duration of time between the rising edge and the falling edge is used to determine the bit period (King: col. 2, lines 24-28) where "equally spaced signal level transitions

Art Unit: 2665

occur during each address bit period so as to thereby define a plurality of data bit periods in each address bit period” is taken to mean that the duration between a rising and falling edge (equally spaced signal level transitions) is used to determine a bit period (define a data bit period). Endick in view of Applicant’s admitted prior art in further view of Yamaguchi in further view of King does not expressly state that the bit period is inversely related to the transmission rate of the communications packet; however, it is well known in the art that a bit period is defined to be the inverse of the transmission rate.

22. Claims 7, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant’s admitted prior art in further view of Yamaguchi (USPN 5,278,848) in further view of King (USPN 3,793,488) as applied to claims 5 and 17 above, and further in view of Miesterfeld et al (USPN 4,706,082).

23. Regarding claims 7 and 20, referring to claims 5 and 17, Endick in view of Applicant’s admitted prior art in further view of Yamaguchi in further view of King does not disclose that the synch pulse holds the accessory bus at a predetermined level for a predetermined amount of time before the rate bit of the communications packet is transmitted over the accessory bus thereby preventing collision between communications packets. Miesterfeld discloses, in a system using a serial data bus, having in every packet start bits, which are used by a detector to determine if another transmitter has started to transmit almost simultaneously, so that collisions due to an almost simultaneous transmission are avoided (col. 5, lines 23-39). These start bits occur at the beginning of the message and it would be obvious to include the start bits in the synch pulse which also comes at the beginning of the message. Also because the start bits are used to indicate a beginning of a message and aid in determining if there is a collision, it would be obvious to

Art Unit: 2665

locate the start bits before the rate bit, which is an important part of the message and so should be sent only after it is determined that the bus is clear. Thus it would have been obvious to one of ordinary skill in the art of communications to have the synch pulse hold the bus at a predetermined level (have start bits) for a predetermined amount of time before the rate bit of the communications packet is transmitted over the accessory bus thereby preventing collision between communications packets.

24. Regarding claim 8, referring to claim 7, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King in further view of Miesterfeld does not expressly disclose that the synch pulse holds the accessory interface bus to a low voltage value for at least two bit periods before the rate bit is transmitted in order to prevent collision between communications packets. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the duration and the value of the start bits are not critical to the operation of the disclosed system, and therefore it would be obvious to use any number of bit periods or any value.

25. Claims 9, 10, 21, 22, 30, 31, 36, 37, 43, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art

Art Unit: 2665

as applied to claims 1, 15, 26, 33, 40, and 45 above, and further in view of Waechter et al (USPN 4,943,963).

26. Regarding claims 9, 21, 30, 36, and 47, referring to claims 1, 15, 26, 33, and 45, Endick in view of Applicant's admitted prior art discloses that a slave select line is used to address a packet to an accessory (col. 5, lines 33-35) and that each option contains an ID (address) (col. 8, lines 44-46). Endick in view of Applicant's admitted prior art does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet; however, using addresses to identify a source and a destination is well known in the art. For instance, Waechter discloses, in a bi-directional bus communication system, the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5, lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated since such addressing is well-known in the art and would allow the elimination of slave select lines within Endick in view of Applicant's admitted prior art's system. In further regards to claim 30, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re

Art Unit: 2665

Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the destination address is not deemed essential to the operation of the disclosed interface bus, and so it would be obvious to have the address be any length including a byte.

27. Regarding claims 10, 22, 31, 37, and 43, referring to claims 9, 21, 30, 36, and 40, Endick in view of Applicant's admitted prior art in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Waechter: col. 5, lines 25-45).

28. Claims 11-13, 23-25, 32, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claims 1, 15, 26, and 33 above, and further in view of Jones et al (USPN 5,140,611).

29. Regarding claims 11 and 23, referring to claims 1 and 15, Endick in view of Applicant's admitted prior art discloses that each communications packet includes a plurality of bits with each bit in the plurality of bits having an assigned value of zero or one (col. 5, lines 22-25). Endick in view of Applicant's admitted prior art does not disclose that each bit includes a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one is assigned to each bit based upon a duration of either the first signal portion or the second signal portion. Jones teaches, in a communication system, (Fig. 2; col. 2, lines 34-52; col. 2, lines 61-67; and col. 5, lines 36-44) in order to allow the stream of data to be self-clocking. It would have been obvious to one of ordinary skill in the art at the time of the invention to have each bit includes a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one is

Art Unit: 2665

assigned to each bit based upon a duration of either the first signal portion or the second signal portion in order to have a data stream which is self-clocking.

30. Regarding claims 12 and 24, referring to claims 11 and 23, Endick in view of Applicant's admitted prior art in further view of Jones discloses that if the duration of the at least one portion falls within a first range the bit is assigned a value of zero and if the duration of the at least one portion falls within a second range, the bit is assigned a value of one (Jones: Fig. 2; col. 2, lines 34-52; col. 2, lines 61-67; and col. 5, lines 36-44).

31. Regarding claims 13 and 25, referring to claims 11 and 23, Endick in view of Applicant's admitted prior art in further view of Jones discloses that each bit in the plurality of bits has a rising edge and a falling edge, and the rising edge and the falling edge are used to synchronize transmission of the communications packet after each bit is transmitted (Jones: Fig. 2; col. 2, lines 34-52; col. 2, lines 53-67; and col. 5, lines 36-53).

32. Regarding claims 32 and 38, referring to claims 26 and 33, Endick in view of Applicant's admitted prior art does not expressly disclose that each communications packet includes a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted. Jones discloses, in a communication system, having each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted (Fig. 2; col. 2, lines 34-52; col. 2,

Art Unit: 2665

lines 53-67; and col. 5, lines 36-53). Jones does this in order to allow the stream of data to be self-clocking. It would have been obvious to one of ordinary skill in the art at the time of the invention to have each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted in order to have a data stream which is self-clocking.

33. Regarding claim 39, referring to claim 38, Endick in view of Applicant's admitted prior art in further view of Jones discloses that each bit in the plurality of bits has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge can be used to synchronize transmission of the communications packet after each bit period (Jones: Fig. 2; col. 2, lines 34-52; col. 2, lines 53-67; and col. 5, lines 36-53).

34. Claims 42, 44, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art in further view of Yamaguchi (USPN 5,278,848) in further view of King (USPN 3,793,488) as applied to claims 41 and 46 above, and further in view of Waechter et al (USPN 4,943,963).

35. Regarding claim 42, referring to claim 41, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King discloses that a slave select line is used to address a packet to an accessory (Endick: col. 5, lines 33-35) and that each option contains an ID (address) (Endick: col. 8, lines 44-46) and communicating a slave address (Yamaguchi: col. 3, lines 32-35). Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King does not disclose that the communication packet includes a source address

Art Unit: 2665

indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet; however, using addresses to identify a source and a destination is well known in the art. For instance, Waechter discloses, in a bi-directional bus communication system, the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5, lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated since such addressing is well-known in the art.

36. Regarding claim 44, referring to claim 42, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Waechter: col. 5, lines 25-45).

37. Regarding claim 48, referring to claim 46, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King does not expressly disclose that the communications packet further includes a checksum for detecting errors in transmission of the communications packet from the accessory to the adapter base; however, using a checksum to detect errors in a communications packet is well known in the art, as is evidenced by Waechter (col. 5, lines 25-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a checksum in order to ensure that the packet was transmitted properly.

Art Unit: 2665

38. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claim 40 above, and further in view of Miesterfeld et al (USPN 4,706,082).

39. Regarding claim 49, referring to claim 40, Endick in view of Applicant's admitted prior art does not disclose that the synch pulse holds the accessory bus at a predetermined level for a predetermined amount of time before the rate bit of the communications packet is transmitted over the accessory bus thereby preventing collision between communications packets.

Miesterfeld discloses, in a system using a serial data bus, having in every packet start bits, which are used by a detector to determine if another transmitter has started to transmit almost simultaneously, so that collisions due to an almost simultaneous transmission are avoided (col. 5, lines 23-39). These start bits occur at the beginning of the message and it would be obvious to include the start bits in the synch pulse which also comes at the beginning of the message. Also because the start bits are used to indicate a beginning of a message and aid in determining if there is a collision, it would be obvious to locate the start bits before the rate bit, which is an important part of the message and so should be sent only after it is determined that the bus is clear. Thus it would have been obvious to one of ordinary skill in the art of communications to have the synch pulse hold the bus at a predetermined level (have start bits) for a predetermined amount of time before the rate bit of the communications packet is transmitted over the accessory bus thereby preventing collision between communications packets.

40. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art in further view of Yamaguchi

Art Unit: 2665

(USPN 5,278,848) in further view of King (USPN 3,793,488) as applied to claim 41 above, and further in view of Jones et al (USPN 5,140,611).

41. Regarding claim 50, referring to claim 41, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King does not disclose that the communications packet includes a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are be used to synchronize transmission of the command or status request signal after each bit is transmitted. Jones discloses, in a communication system, having each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted (Fig. 2; col. 2, lines 34-52; col. 2, lines 53-67; and col. 5, lines 36-53). Jones does this in order to allow the stream of data to be self-clocking. It would have been obvious to one of ordinary skill in the art at the time of the invention to have each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted in order to have a data stream which is self-clocking.

42. Claims 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art in further view of Yamaguchi

Art Unit: 2665

(USPN 5,278,848) in further view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963).

43. Regarding claim 51, Endick discloses a data packet transmitted over an accessory interface bus having a number of devices coupled thereto for controlling, monitoring and testing the operations of an accessory coupled to the interface bus independent from a base telephone to which the accessory correspond (Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; col. 6, lines 47-64; and col. 4, lines 20-38).

Endick does not disclose that the telecommunication system comprises a telephone headset and a headset adapter coupled to the telephone headset and having an accessory interface bus. However, Endick does disclose having an accessory interface bus (Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). This bus is part of an accessory adapter where the accessory adapter is broadly defined to be a system which interfaces a phone system to accessories. Endick also discloses that these accessories can include a telephone headset (col. 3, lines 66-68). It would have been obvious to one of ordinary skill in the art to have the telecommunication system comprise a telephone headset and a headset adapter where the headset adapter is broadly defined to be the accessory adapter since it is known in the art to include a telephone headset as an accessory item in order to allow a user of the telecommunication system to use the headset.

Additionally, Endick does not expressly disclose that the accessories are headset accessories since Endick only expressly discloses accessories for the base telephone. However, Endick does leave open the possibility for the accessories to be headset accessories by disclosing that the accessories are not limited to the aforementioned accessories for the base telephone (col.

Art Unit: 2665

3, line 66-col. 4, line 2). Applicant admits that accessories for a telephone headset are well known as prior art (page 1, line 13-page 2, line 21) where the accessories are used to add functionality to or ease the use of a telephone headset. It is also very old and well known in the art to use buses to communicate between devices connected to the bus, and thus it would have been obvious to one of ordinary skill in the art at the time of the invention that the bus could be used to add accessories to another accessory. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the accessories include accessories for the telephone headset since accessories to telephone headsets are very well known as a means to add functionality to or ease the use of a telephone headset.

Endick in view of Applicant's admitted prior art does not disclose that the data packet comprises: a synch pulse having a rate bit that defines a rate at which the data packet is being transmitted. Yamaguchi discloses, in a bi-directional communication system, having a synch pulse contained in each packet (col. 8, lines 10-15 where a frame and a packet can be viewed as being analogous. Yamaguchi further discloses that synch pulses are well known in the art (col. 10, lines 9-14). Typically a synch pulse is used in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal, as is evidenced by King (col. 2, lines 10-39). It is also obvious that such a system would allow for a variety of transmission rates to be used such that each accessory defines its own transmission rate using the synch pulse. It would have been obvious to one of ordinary skill in the art of

Art Unit: 2665

packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King discloses that a slave select line is used to address a packet to an accessory (Endick: col. 5, lines 33-35) and that each option contains an ID (address) (Endick: col. 8, lines 44-46) and communicating a slave address (Yamaguchi: col. 3, lines 32-35). However, using addresses to identify a source and a destination is well known in the art. For instance, Waechter discloses, in a bi-directional bus communication system, the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5, lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated since such addressing is well-known in the art.

44. Regarding claim 52, referring to claim 51, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Waechter: col. 5, lines 25-45).

Art Unit: 2665

45. Claims 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art in further view of Yamaguchi (USPN 5,278,848) in further view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963) as applied to claim 51 above, and further in view of Jones et al (USPN 5,140,611).

46. Regarding claims 53 and 54, referring to claim 51, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King in further view of Waechter does not disclose that the communications packet includes a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are be used to synchronize transmission of the command or status request signal after each bit is transmitted. Jones discloses, in a communication system, having each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted (Fig. 2; col. 2, lines 34-52; col. 2, lines 53-67; and col. 5, lines 36-53). Jones does this in order to allow the stream of data to be self-clocking. It would have been obvious to one of ordinary skill in the art at the time of the invention to have each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to

Art Unit: 2665

synchronize transmission of the single communications packet after each bit is transmitted in order to have a data stream which is self-clocking.

47. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claim 57 above, and further in view of Yamada (USPN 5,414,751).

48. Regarding claim 59, referring to claim 57, Endick in view of Applicant's admitted prior art does not expressly disclose that the common commands include: a command for requesting a firmware version number from each accessory in the plurality of accessories. Yamada discloses, in a system comprising a base unit and an accessory (mobile) unit, having a command for requesting a firmware version number from each accessory in the plurality of accessories (col. 4, lines 20-32) in order to determine if the accessory needs an update of the firmware. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a command for requesting a firmware version number from each accessory in the plurality of accessories in order to determine if the accessory needs an update of the firmware.

49. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claim 57 above, and further in view of Tanaka et al (USPN 5,003,536).

50. Regarding claim 62, referring to claim 57, Endick in view of Applicant's admitted prior art does not expressly disclose that the accessory specific commands include: a command for writing data to a memory within the specific accessory; and a command for reading data from a memory within the specific accessory. Tanaka discloses, in a system using a base (master) and accessory (slave), having a command for writing data to a memory within the specific accessory;

Art Unit: 2665

and a command for reading data from a memory within the specific accessory (col. 4, lines 1-29). Such a system is well known in the art in order to allow for distributed memory and in order to allow the accessory to store information relating to future communications with the controller. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a command for writing data to a memory within the specific accessory; and a command for reading data from a memory within the specific accessory in order to allow for distributed memory and in order to allow the accessory to store information relating to future communications with the controller.

51. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art in further view of Tanaka et al (USPN 5,003,536) in further view of Yamada (USPN 5,414,751).

52. Regarding claim 63, Endick discloses a combination comprising: an interface bus having an accessories adapter base and a plurality of accessories for the base coupled to the interface bus (Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38), and a communications protocol for controlling and monitoring operations of the headset adapter base and the plurality of accessories independently of a base telephone to which the telephone adapter base is configured to be coupled (col. 6, lines 47-64 and col. 8, line 15-col. 9, line 36), the communications protocol including at least one command selected from the group of commands consisting of: a command for turning an accessory on or off (col. 7, line 56-col. 8, line 14, esp. col. 7, lines 59-63); a command for polling the interface bus in order to determine what accessories are coupled to the interface bus (col. 8, line 15-col. 9, line 36); a command for resetting an accessory (col. 8, lines 59-68); a command for determining the status of an accessory

Art Unit: 2665

(col. 7, line 56-col. 8, line 14, esp. col. 8, lines 7-10); and a command for determining the identity of each accessory (col. 8, lines 44-46).

Endick does not disclose that the accessories interface bus is a telephone headset accessories interface bus; however, Endick does disclose having a headset accessory on the bus in addition to other accessories where the other accessories could be headset accessories although this is not expressly disclosed (col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). Applicant admits that accessories for a telephone headset are well known as prior art (page 1, line 13-page 2, line 21) where the accessories are used to add functionality to or ease the use of a telephone headset. It is also very old and well known in the art to use buses to communicate between devices connected to the bus, and thus it would have been obvious to one of ordinary skill in the art at the time of the invention that the bus could be used to add accessories to another accessory. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the accessories include accessories for the telephone headset since accessories to telephone headsets are very well known as a means to add functionality to or ease the use of a telephone headset.

Endick in view of Applicant's admitted prior art does not expressly disclose that the accessory specific commands include a command for simulating a button press of the specific accessory or base; however, Endick in view of Applicant's admitted prior art does suggest this by disclosing that an option can be turned on remotely (col. 7, lines 59-63) where it is obvious that an option typically have a power switch located on the device itself. In addition, remote control is very well known in the art as a means to allow a user to control a device without being in physical contact with the device. It would have been obvious to one of ordinary skill in the art

Art Unit: 2665

at the time of the invention to use utilize a remote control in order to allow a user to remotely control an accessory from the base or to control the base from an accessory device such that the user is able to control the accessory or base without being in physical contact with the accessory or base.

Endick in view of Applicant's admitted prior art does not disclose a command for reading from or writing to a memory structure within an accessory. Tanaka discloses, in a system using a base (master) and accessory (slave), having a command for writing data to a memory within the specific accessory; and a command for reading data from a memory within the specific accessory (col. 4, lines 1-29). Such a system is well known in the art in order to allow for distributed memory and in order to allow the accessory to store information relating to future communications with the controller. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a command for writing data to a memory within the specific accessory; and a command for reading data from a memory within the specific accessory in order to allow for distributed memory and in order to allow the accessory to store information relating to future communications with the controller.

Endick in view of Applicant's admitted prior art in further view of Tanaka does not expressly disclose a command for determining the version of each accessory. Yamada discloses, in a system comprising a base unit and an accessory (mobile) unit, having a command for requesting a firmware version number from each accessory in the plurality of accessories (col. 4, lines 20-32) in order to determine if the accessory needs an update of the firmware. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a

Art Unit: 2665

command for requesting a firmware version number from each accessory in the plurality of accessories in order to determine if the accessory needs an update of the firmware.

53. Claims 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art in further view of Tanaka et al (USPN 5,003,536) in further view of Yamada (USPN 5,414,751) as applied to claim 63 above, and further in view of Yamaguchi (USPN 5,278,848) in further view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963).

54. Regarding claim 64, Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada discloses a data packet transmitted over an accessory interface bus having a number of devices coupled thereto for controlling, monitoring or testing the operations of a headset accessory coupled to the interface bus (Endick: Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada does not disclose that the telecommunication system comprises a telephone headset and a headset adapter coupled to the telephone headset and having an accessory interface bus. However, Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada does disclose having an accessory interface bus (Endick: Fig. 4; col. 3, lines 4-14; col. 3, line 58-col. 4, line 10; and col. 4, lines 20-38). This bus is part of an accessory adapter where the accessory adapter is broadly defined to be a system which interfaces a phone system to accessories. Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada also discloses that these accessories can include a telephone headset (col. 3, lines 66-68). It would have been obvious to one of ordinary skill in the art to have the telecommunication system

Art Unit: 2665

comprise a telephone headset and a headset adapter where the headset adapter is broadly defined to be the accessory adapter since it is known in the art to include a telephone headset as an accessory item in order to allow a user of the telecommunication system to use the headset.

Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada also does not disclose that the data packet comprises: a synch pulse having a rate bit that defines a rate at which the data packet is being transmitted. Yamaguchi discloses, in a bi-directional communication system, having a synch pulse contained in each packet (col. 8, lines 10-15 where a frame and a packet can be viewed as being analogous. Yamaguchi further discloses that synch pulses are well known in the art (col. 10, lines 9-14). Typically a synch pulse is used in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal, as is evidenced by King (col. 2, lines 10-39). It is also obvious that such a system would allow for a variety of transmission rates to be used such that each accessory defines its own transmission rate using the synch pulse. It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada in view further view of Yamaguchi in further view of King does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of

Art Unit: 2665

the communications packet. Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada in view further view of Yamaguchi in further view of King discloses that a slave select line is used to address a packet to an accessory (Endick: col. 5, lines 33-35) and that each option contains an ID (address) (Endick: col. 8, lines 44-46) and communicating a slave address (Yamaguchi: col. 3, lines 32-35). However, using addresses to identify a source and a destination is well known in the art. For instance, Waechter discloses, in a bi-directional bus communication system, the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5, lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated since such addressing is well-known in the art.

55. Regarding claim 65, referring to claim 64, Endick in view of Applicant's admitted prior art in further view of Tanaka in further view of Yamada in further view of Yamaguchi in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Waechter: col. 5, lines 25-45).

56. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claim 66 above, and further in view of Tanaka et al (USPN 5,003,536) in further view of Yamada (USPN 5,414,751).

57. Regarding claim 67, referring to claim 66, Endick in view of Applicant's admitted prior art discloses that the at least one command is selected from the group of commands consisting

Art Unit: 2665

of: a command for resetting an accessory (col. 8, lines 59-68); a command for determining the status of an accessory (col. 7, line 56-col. 8, line 14, esp. col. 8, lines 7-10); and a command for determining the identity of each accessory (col. 8, lines 44-46).

Endick in view of Applicant's admitted prior art does not expressly disclose that the accessory specific commands include a command for simulating a button press of the specific accessory or base; however, Endick in view of Applicant's admitted prior art does suggest this by disclosing that an option can be turned on remotely (col. 7, lines 59-63) where it is obvious that an option typically have a power switch located on the device itself. In addition, remote control is very well known in the art as a means to allow a user to control a device without being in physical contact with the device. It would have been obvious to one of ordinary skill in the art at the time of the invention to use utilize a remote control in order to allow a user to remotely control an accessory from the base or to control the base from an accessory device such that the user is able to control the accessory or base without being in physical contact with the accessory or base.

Endick in view of Applicant's admitted prior art does not disclose a command for reading from or writing to a memory structure within an accessory. Tanaka discloses, in a system using a base (master) and accessory (slave), having a command for writing data to a memory within the specific accessory; and a command for reading data from a memory within the specific accessory (col. 4, lines 1-29). Such a system is well known in the art in order to allow for distributed memory and in order to allow the accessory to store information relating to future communications with the controller. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a command for writing data to a memory within the

Art Unit: 2665

specific accessory; and a command for reading data from a memory within the specific accessory in order to allow for distributed memory and in order to allow the accessory to store information relating to future communications with the controller.

Endick in view of Applicant's admitted prior art in further view of Tanaka does not expressly disclose a command for determining the version of each accessory. Yamada discloses, in a system comprising a base unit and an accessory (mobile) unit, having a command for requesting a firmware version number from each accessory in the plurality of accessories (col. 4, lines 20-32) in order to determine if the accessory needs an update of the firmware. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a command for requesting a firmware version number from each accessory in the plurality of accessories in order to determine if the accessory needs an update of the firmware.

58. Claims 68 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endick et al (USPN 5,339,360) in view of Applicant's admitted prior art as applied to claim 66 above, and further in view of Yamaguchi (USPN 5,278,848) in further view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963).

59. Regarding claim 68, referring to claim 66, Endick in view of Applicant's admitted prior art does not disclose a synch pulse having a rate bit that defines a rate at which the data packet is being transmitted. Yamaguchi discloses, in a bi-directional communication system, having a synch pulse contained in each packet (col. 8, lines 10-15 where a frame and a packet can be viewed as being analogous. Yamaguchi further discloses that synch pulses are well known in the art (col. 10, lines 9-14). Typically a synch pulse is used in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not

Art Unit: 2665

sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal, as is evidenced by King (col. 2, lines 10-39). It is also obvious that such a system would allow for a variety of transmission rates to be used such that each accessory defines its own transmission rate using the synch pulse. It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King discloses that a slave select line is used to address a packet to an accessory (Endick: col. 5, lines 33-35) and that each option contains an ID (address) (Endick: col. 8, lines 44-46) and communicating a slave address (Yamaguchi: col. 3, lines 32-35). However, using addresses to identify a source and a destination is well known in the art. For instance, Waechter discloses, in a bi-directional bus communication system, the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5, lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated since such addressing is well-known in the art.

Art Unit: 2665

60. Regarding claim 69, referring to claim 66, Endick in view of Applicant's admitted prior art in further view of Yamaguchi in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Waechter: col. 5, lines 25-45).

Conclusion

61. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2665

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

DR

A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal stroke extending to the left.

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600